99A-113

PSP COVER SHEET

Proposal Title: Tracy Fish Test Facilities - Technology Development to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta

Applicant Name: Kirk C. Rodgers
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Amount of Funding Requested: $5.7 million for two years and three months

Topic Applied for: FISH PASSAGE/FISH SCREENS

Does the Proposal Address a Specified Focused Action? Yes

Counties the Project Located in: Bordering Contra Costa, San Joaquin, and Alameda Counties

Geographic Area of Proposal: Delta: South Delta on Old River (Tracy Fish Collection Facility)

Primary Species Which the Proposal Addresses:

San Joaquin and East-side Delta Tributaries fall-run chinook
Winter-run chinook salmon
Late-fall run chinook salmon
Fall-run chinook salmon
Delta smelt
Splittail
Green Sturgeon
Longfin smelt
Steelhead
Striped bass
Other: Note that all south Delta fish species are associated with the salvage facility; other "important" species addressed include American shad, threadfin shad, channel catfish, and white catfish

The ERP Strategic Objective and Target(s) that the project addresses:

This project addresses directly the CALFED ERP strategic objective to "Reduce entrainment of all life stages of fish into water diversions in order to increase survival and population abundance to levels that contribute to the overall health of the Delta and reduce conflicts for other beneficial

uses of land and water", as noted on page 419 of ERP Volume I, February, 1999. This project will greatly assist CALFED's overall objectives by providing the technology to improve Delta fish screening systems, a major requirement for all CALFED alternatives.

This project also addresses the CALFED ERP population targets as noted on pages 18 through 30 of ERP Volume II, February 1999 for sensitive delta fish species. By improving Delta fish screening systems, the project will contribute to population recoveries within the Delta and the Central Valley by reducing losses at the major diversions.

Type of Applicant: Federal Agency

Type of Project: Research

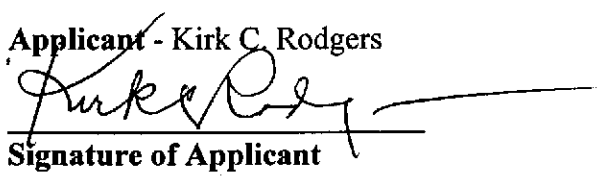
By signing below, the applicant declares the following:

1.) The truthfulness of all representations in the proposal;

2.) The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and

3.) The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

Applicant - Kirk C. Rodgers



Signature of Applicant

TRACY FISH TEST FACILITIES - TECHNOLOGY DEVELOPMENT TO MEET MODERN FISH PROTECTION CRITERIA AND ENHANCE FISH SCREENING AND SALVAGE FACILITIES AT WATER DIVERSIONS IN THE SACRAMENTO-SAN JOAQUIN DELTA, CA

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FEDERAL GOVERNMENT

PARTICIPATING AND COLLABORATING WITH:

CALIFORNIA DEPARTMENT OF FISH AND GAME
UNIVERSITY OF CALIFORNIA AT DAVIS
NATIONAL MARINE FISHERIES SERVICE
US FISH AND WILDLIFE SERVICE
CALIFORNIA DEPARTMENT OF WATER RESOURCES
CALIFORNIA DEPARTMENT OF FISH AND GAME
SAN LUIS/ DELTA-MENDOTA WATER AUTHORITY
CALFED

I-013271

99A-113

EXECUTIVE SUMMARY

The overall goal of this project is to complete all engineering, design, environmental documentation, permitting, laboratory activities, and other activities necessary for constructing and testing new fish facility technology for improving fish protection at major water diversions in the south Delta, CA. New test facilities, including a 500 cfs test channel, would be developed near the existing Tracy Fish Collection Facility, (Old River, near the border of Contra Costa, San Joaquin, and Alameda Counties). Additional testing and research activities would be conducted at Reclamation's laboratory facilities at Denver, at UC Davis laboratories, and potentially at the fish release sites in cooperation with the California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

Large Delta diversions such as the Federal Tracy Pumping Plant and the California Harvey O. Banks Pumping Plant presently divert millions of acre feet of water using fish protection facilities developed with 1950's louver technology. Modernizing the fish facilities is made difficult in this setting by complex needs for screening, collecting, holding, and re-distributing fish in a challenging environment of tidal cycles, heavy debris loadings, lack of sweeping flows at diversions, and numerous listed and non-listed species requiring protection from entrainment. Major tasks include final design engineering with "construction ready"specifications for a test facility up to 500 cfs; fishery-engineering research to assist and refine facility design and future construction, operation and evaluation; completion of all environmental compliance and permit requirements and documents; and, overall project management and coordination. The cost of this program is estimated at $5.7 million during 7/1999 through 9/2001. No adverse impacts are anticipated. This proposal does not include construction of the project which has been estimated to cost approximately 25-30 million dollars.

The Tracy site and associated conditions are ideally suited for focusing on new protection technology for the Delta. The existing large, continuously operating diversion (up to 4,600 cfs) delivers and provides all conditions expected to challenge future Delta facilities, i.e. realistic levels of debris and types, all fish species and sizes, exotic nuisance species such as mitten crab, and tidal interactions. Additional benefits include: extensive baseline data, existing facilities in-place for testing (fisheries labs, aquaculture facility, staff offices and computer facilities, experimental flumes, installed fish-friendly experimental lifts and on-ground fish holding and debris removal test equipment) and experienced scientific and engineering staff engaged for many years with interdisciplinary work on fish screen/fish handling/fish sorting/fish transporting technical development on numerous projects.

This project combines design engineering for a new test facility with fishery-engineering studies and experiments in governmental and University laboratories, and work on-site. Monitoring and data evaluations will be performed under strict standards of scientific methods by both governmental and University scientists for all research, ranging from systematic video observations of fish behavior near engineering features to extensive, replicated experiments of fish survival through devices such as lifts, by-passes, and modified louvers and screens. All data are taken at levels required for publication in the scientific literature. Progress and final technical reports are required of all scientists and engineers.

This project is being extensively coordinated with local entities. A Notice of Intent was placed in the Federal Register on February 19, 1999 announcing the preparation of an EIS or EA for the project. Approximately 460 people/entities were sent a project fact sheet of a proposed Tracy Test Facility in March, 1999, informing them of the purpose, need for action, planning activities, benefits, cooperating agencies and points of contact. Groups notified included the California Sport Fishing Alliance, Delta Protection Commission, San Joaquin River Users Organization, California Striped Bass Association, United Anglers of California, The Bay Institute, Natural Resources Defense Council, Sierra Nevada Alliance, California Sport Fishing Protection Alliance, Delta Wetlands, Environmental Defense Fund, Citizens for Safe Drinking Water, The Nature Conservancy, Save San Francisco Bay Association, Friends of the River, and Sierra Club Legal Defense Fund. Two public scoping meetings were held in March, 1999. Appropriate County Officials have been notified. Local landowners have been notified and other parties contacted including: San Luis/Delta-Mendota Water Authority, DWR, WAPA, Banta Carbona Irrigation District, Reclamation District 800, 2065 and 2118, California Urban Water Agencies, and an additional 14 entities.

The proposed project addresses the CALFED ERP strategic objective to "Reduce entrainment of all life stages of fish into water diversions in order to increase survival and population abundance to levels that contribute to the overall health of the Delta and reduce conflicts for other beneficial uses of land and water", as noted on page 419 of ERP Volume I, February, 1999. This project also addresses the CALFED ERP population targets as noted on pages 18 through 30 of ERP Volume II, February 1999 for sensitive delta fish species. This project will greatly assist CALFED's overall objectives by providing the technology to improve Delta fish screening systems, a major requirement for all CALFED alternatives.

PROJECT DESCRIPTION

Proposed Scope of Work - The Federal Tracy Pumping Plant and the California Harvey O. Banks Pumping Plant divert millions of acre feet of water from the south Delta annually. These diversions present unique fish protection challenges that can not be solved by implementing standard fish screening methods. Typically, flows from both the Sacramento and San Joaquin Rivers are drawn towards these large diversions, eliminating efficient fish escape routes while causing debris sinks. As a consequence, for fifty years fish facility operations in the Delta have required fish salvage, holding, and transportation to release sites outside the influence of the pumping plants. In addition, the effectiveness of fish protection at these sites has diminished over the years because the facilities were not designed to protect the many different fish species which are now of concern. Increasing exotic debris loads have also limited effectiveness. Discussions on methods for improving fish protection in the south Delta have been ongoing by regulatory and resource agencies for many years. Representatives of these agencies participating on the Tracy Technical Advisory Team have reached consensus on the need for a field test facility with up to 500 cfs discharge capacity, operating in a real-world south Delta water diversion environment, in which many of the ideas for improving fish salvage can be rapidly developed and proven prior to replacing existing facilities. The primary purpose of the proposed facility would be testing and evaluation of new fish salvage and debris handling methods. However, after completion of the necessary testing the facility could be operated to provide

improved fish salvage and increased operational flexibility for existing salvage operations.

The overall goal of this project is to develop and test new fish collection, holding, transport, and release technology for improving fish protection at major water diversions in the south Delta, CA, with benefits for all large diversions in the Delta. New facilities would be developed at the present Tracy Fish Collection Facility site, with input from Reclamation's Denver hydraulic laboratories, UC Davis laboratories, and near present state and federal fish re-distribution sites (CDF&G). Work efforts would include testing to support and refine the facility design, and final engineering design with development of specifications for construction of a the prototype test facility. The project also includes necessary environmental studies, with documentation and obtaining required construction permits. Actual construction of the prototype would require additional funding beyond the present proposal.

The specific tasks, deliverables and phases of the project are described more fully in the "Monitoring and Data Collection Methodology" and "Schedule" sections of the proposal. The tasks include: Environmental Compliance; Environmental Design; Fishery and Engineering Studies; and Program Management/Coordination. These tasks are proposed to be proceed concurrently with all environmental compliance activities (NEPA/CEQA/ESA/permits) completed by December 2000 and all fishery and engineering studies and engineering design work completed by September 2001.

The Tracy site provides an excellent location for focusing on next-generation fish protection technology for the Delta. The large, continuously operating diversion (up to 4600 cfs flows) delivers to a test facility all conditions expected to challenge future facilities, i.e. all fish species and sizes, debris quantity and type, exotic nuisance species such as mitten crab, and tidal interactions. Additional benefits to the Tracy site include: extensive scientific background data gathered over decades; existing physical facilities in-place for testing (fisheries labs, aquaculture facility, staff facilities, testing capabilities, experimental flumes); and, an experienced scientific and engineering staff engaged over the years with interdisciplinary work on fish screen/fish handling/fish sorting/fish transporting technical development.

Major aspects of modern Delta fish protection technology that would be pursued to meet present-day criteria include: - improved, automated debris handling and separation/removal; - use of louvers and positive barrier screens (0.2 ft/s approach velocity) operated together to achieve initial sorting of fish by size and positive screening; - development of fish crowder mechanisms to move fish and predators through channels to bypass, holding, and transport facilities; - control of hydraulics through the intake channels in the face of changing tidal effects and water diversion rates; - using fish friendly lifts to provide bypass flows and deliver fish into above ground holding chambers for further debris removal and fish sorting; - and, overall improvements in fish transport and stocking activities. Other components requiring testing and development include: - trash deflector; - fish friendly trash rack and cleaner; - water return system; - fish bypass systems; -on-ground holding/separator structures; - hauling truck loading and transport methods; - and, facilities at fish re-distribution sites in the Delta.

The future Tracy Fish Test Facility will require considerable on-site management and oversight. Reclamation has had a management team and the Tracy Fish Facility Branch in place for years associated with operations of the existing Tracy Fish Collection Facility. These organizations will provide on-site management of project development while Regional (MP400) and Area (South Central California Office) staff will assist in coordination to insure compatibility of the new facility with the existing Tracy Fish Collection Facility operations.

Future construction of a facility would be overseen by Reclamation's Mid-Pacific Region Construction Office. Management of research and associated technical activities, including coordination with research cooperators will be undertaken by the Tracy Technical Team Leader (USBR - Denver), with assistance from on-site Mid-Pacific and Tracy staff. An overall management plan for a potential Tracy test facility was developed earlier and includes mechanisms for extensive interagency coordination and technical advisory input. A Tracy Technical Advisory Team, (TTAT), consisting of representatives from USBR, DWR, DFG, USFWS, NMFS, and the San Luis Delta-Mendota Water Authority has been meeting monthly since November to provide guidance and technical input on potential needs for a Tracy Fish Test Facility. The TTAT would be continue to help refine final designs and operations of a Tracy facility, and to make recommendations for future evaluation and research priorities.

Location and /or Geographic Boundaries of Project - The prototype test facility would be located on the Old River, near the border of Contra Costa and Alameda Counties, near the Federal Tracy Fish Collection Facility on Bureau of Reclamation land (figure 1). Testing would occur at the Federally-owned Tracy site, Reclamation labs in Denver, UC Davis labs, and near fish redistribution sites on the lower San Joaquin and Sacramento rivers (Contra Costa County).

ECOLOGICAL/BIOLOGICAL BENEFITS

Ecological/Biological Objectives - Main ecological/biological objectives are to improve the protection of multiple fish species populations in the Delta by increasing salvage of a broader range of sizes and species at large water diversions. The new technology will significantly advance all future new and/or retrofitted Central Valley fish protection facilities at water diversions, especially at tidal-influenced or lake-like sites with poor flow guidance away from the diversion. Objectives include integrating new, more flexible, fish re-distribution activities with other ecological restoration activities, when possible, by stocking sensitive species at newly restored habitats developed under CALFED sponsored programs. A total of 51 fish species may be positively influenced by upgrading technology though focus will be on increased protection for sensitive and anadromous species such as: Delta smelt, longfin smelt, splittail, chinook salmon, steelhead, sturgeon, striped bass, and American shad. Primary benefits will be new technology that, when implemented, can immediately improve salvage and re-distribution of fish in the south Delta. A primary ecological benefit will occur as more native fish are allowed to grow and reproduce, which should enhance Delta ecological conditions. Secondary benefits will accrue to the sportfishing public as economically important species such as salmon, striped bass, white catfish, and American shad see greater protection from entrainment effects. The new technology will benefit all third parties involved with providing and deciding upon fish protection at intakes around and beyond the south Delta.

The major hypothesis/question to be evaluated is whether more efficient fish screens, louvers, crowders, separators, bypasses, bypass pumps, and fish transportation and stocking procedures can be developed. Enhancement of fish protection at large water diversions in the south Delta and at potential future north Delta sites requires development and implementation of new technology that meets modern, regulatory agency fish protection criteria which is presently not being met at many existing facilities.

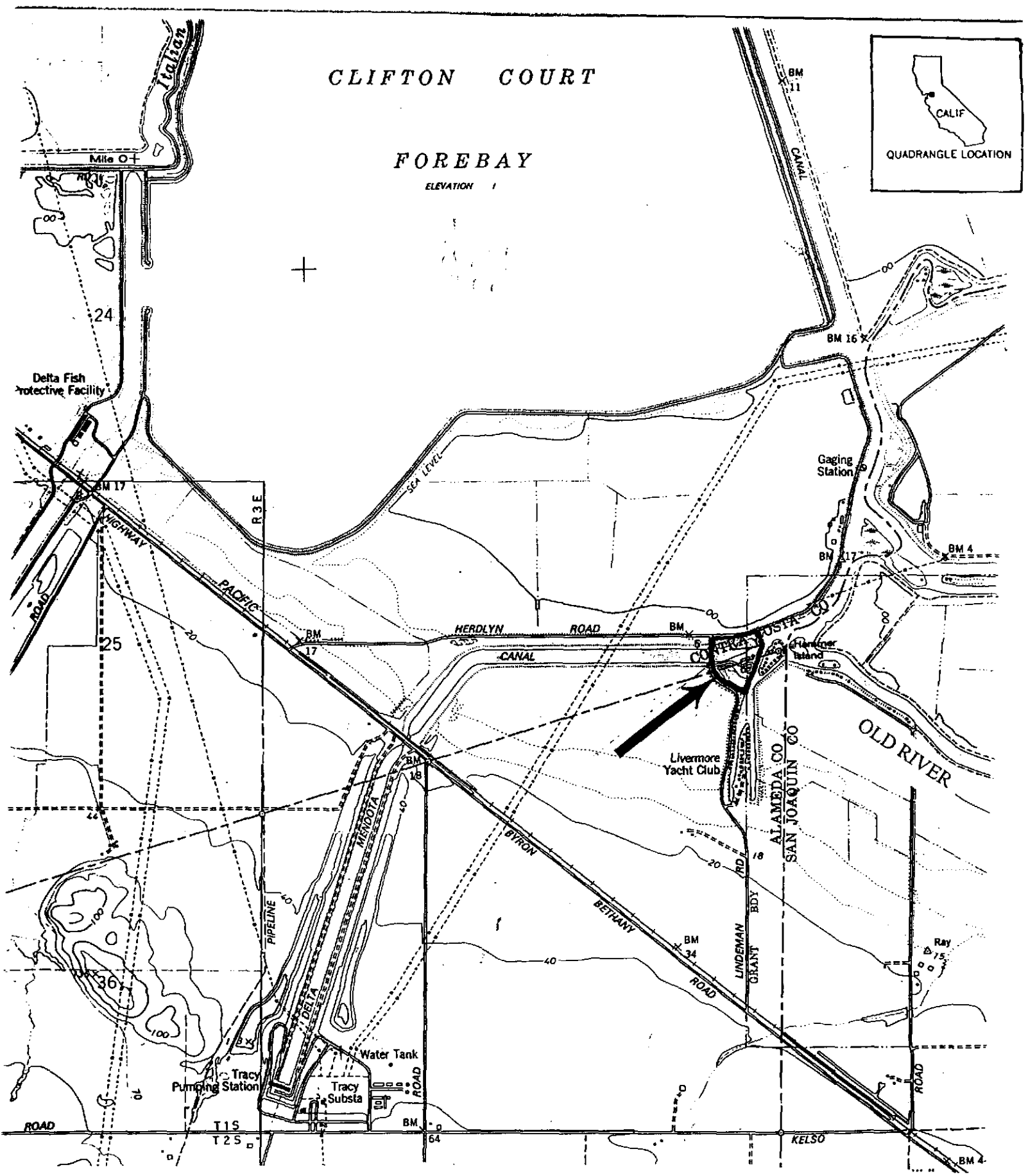

Figure 1: Location of Proposed Tracy Prototype Test Facility, California. (Approximate 37°49' North Latitude, 121°33'30" West Longitude)

The durability of benefits from the proposed project are expected to be long-lasting. Enhanced technology, once implemented, will annually provide for increased fish salvage and a more diverse, healthier fish composition reintroduced back into favorable south Delta habitats. New fish protection technology will provide more options for future adaptive management programs. The developments for debris handling and separation/removal, control of exotic species such as mitten crab, fish crowder and separation technology, "fish friendly" lifts to assist fish handling, feedback control of hydraulic conditions within the screening facility, and others, will accelerate new technology implementation at other sites, allowing for broad improvement of fish protection at water diversions throughout the Central Valley.

Linkages - This project is "linked" to activities of the Central Valley Project, going back to initial concerns for protecting fish at water intakes in the Central Valley in the 1930's. Previous developments that led to the present Delta fish salvage facilities at Federal and State diversions occurred in the 1950's and 1960's. The project is a continuation and expansion of fish improvement activities which Reclamation has initiated at Tracy. This project would take advantage of major developments in the 1990's by Reclamation staff and those facilities constructed to improved fish protection technology through the Red Bluff "Fish Friendly" Pump Research Project on the upper Sacramento River (1992 to present), and the Tracy Fish Facility Improvement Program (1989 to present). The Tracy Fish Facility Improvement Program is identifying and making improvements to the existing fish facilities. The project is also linked to existing CVPIA legal mandates for improving and/or replacing fish screens at the Tracy facilities.

The project directly addresses the CALFED ERP strategic objective to "Reduce entrainment of all life stages of fish into water diversions in order to increase survival and population abundance to levels that contribute to the overall health of the Delta and reduce conflicts for other beneficial uses of land and water", as noted on page 419 of ERP Volume I, February, 1999. The project will greatly assist CALFED's overall objectives by providing the technology to improve Delta fish screening systems, a major requirement for all CALFED alternatives.

System-Wide Ecosystem Benefits - The technology provided will enhance protection for all fish species encountering water diversions in the Delta. Consequently, all ERP activities aimed at restoring habitats and populations of Delta fish species will benefit by implementation of modern, positive-barrier fish screen technology and salvage systems that minimize entrainment losses and increase fish numbers resulting from ecosystem restoration.

Compatibility with Non-Ecosystem Objectives - This project will help assure water supply reliability by providing adequate fish protection at water diversion sites, thus reducing conflicts with entrainment of listed fish species (endangered and threatened). Water supplies will be further assured by enhanced protection of all fish species, which could lessen the need to list additional native species in the future. The technology advanced for these large Delta water diversions will readily apply, in varying degrees, to all Central Valley water diversions. Regulatory agencies will have new tools to recommend for future fish protection technology around the country.

TECHNICAL FEASIBILITY AND TIMING

Retrofitting old Delta fish facilities with technology developed in experimental labs and through on-site testing is on-going at limited levels. However, to develop positive barrier technology with approach velocities of 0.2 fps, and other needs such as automated debris cleaners and fish crowding/sorting methods, new prototype facilities with experimental flexibility are required. A prototype facility of 2500 cfs, compared to the proposed 500 cfs facility, was originally considered for testing. However, a great deal of experimental "inflexibility" is imparted with a large production sized facility. Months may be required, compared to days with a smaller test system, to change out screen types, louver systems, etc. Observations on sub-system behavior are extremely difficult, which makes evaluations of influencing factors much more uncertain. Major gains in experimentation, with economic benefits, are possible through use of a smaller on-site test facility. Valid testing under modern fish criteria is possible in a 500 cfs facility. Expansion of findings to 2500 cfs modular units (or larger) could confidently be achieved. In summary, there is less risk, and a greater chance of developing workable new technology, using a less costly 500 cfs prototype. Such a facility would accept full size fish exclusion elements as established by state and Federal screen design criteria (considering allowable fish exposure times) which could not be effectively modeled in laboratory facilities.

Importantly, the Tracy Fish Test Facilities will perform in concert with the operating Tracy intake channel, which continuously diverts major volumes of water (up to 4600 cfs) with high debris and fish densities under tidal changes(up to 5 ft daily). Other potential sites in the Delta were considered, such as the State Skinner fish facility or sites independent of an on-going operating large water diversion. It was concluded that the Tracy site simulates accurately the future variables and challenges that new screening/salvaging facilities in the south Delta will encounter.

Environmental compliance documents would be developed for the prototype construction. Reclamation acting as the lead federal agency, and the California Department of Water Resources acting as the lead State agency, will initiate and complete the necessary NEPA and CEQA compliance documentation prior to any project construction activities. In addition, no construction would begin until: Clean Water Act Section 404 authorization has been obtained (or determined not to be required) from the Corps of Engineers; until a Clean Water Act Section 401 water quality certification has been issued (waived or determined not to be required) by the CA Regional Water Quality Control Board; and until a Clean Water Act NPDES permit has been issued by the CA Regional Water Quality Control Board. Reclamation will also comply with any or all of the following laws, policies and plans, as applicable for the construction and operation of a prototype test facility: Rivers and Harbors Act, as amended; Clean Air act, as amended; National Historic Preservation Act of 1966, as amended; Fish and Wildlife Coordination Act, as amended; Endangered Species Act of 1973, as amended (ESA), and the California Endangered species Act (CESA); Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetlands; Executive Order 12898, Environmental Justice; CA Fish and Game Code (Section 1601) Stream bed Alteration Agreement; Contra Costa County Permit(s); and, Levee District Permit(s). If additional land is needed for construction of the new Tracy Test Facilities, Federal Land Acquisition procedures will be followed.

MONITORING AND COLLECTION METHODOLOGY

The following specific tasks describe the monitoring and collection methodology which will assist in developing and testing new fish facility technology.

Fishery-Engineering Laboratory Studies, USBR, Denver - Lab flumes, fish holding labs, and models of above-ground holding facilities will be used to conduct experiments to assist with development of engineering designs and prototype operations. Such studies will expedite optimum concept development and minimize prototype development and operational expenses. Delta species such as splittail, chinook salmon, striped bass, catfish, and steelhead (rainbow trout) will be subjected to louver/screen tests, bypass studies, and mechanical fish crowder and sorter features under various flows. Fish behavior, survival, and movements will be observed to assist selection of engineering features for the prototype facility. Hydraulics of the operating flumes and modeled holding facilities will be monitored with three-dimensional flow meters to assure criteria(such as approach velocities) compliance. Experiments to refine devices to exclude mitten crabs from facilities will be undertaken. Debris removal devices, including traveling screens, will be tested for their "fish friendliness" as potential components of the Tracy Fish Test Facility. All experiments will be carried out with replicated designs that ensure statistical analysis using standard statistical procedures when applicable. Fish handling and testing procedures documented with the Red Bluff and Tracy studies will be followed as applicable (McNabb et al 1998; Tracy Report Series, Vols. 2, 3, 7, and 8). Annual reports including methods, results and recommendations for tests at the Tracy prototype will be issued. The present Tracy Report Series peer review process and network will be used to assure interagency peer review of all products.

UC Davis Fishery-Engineering Lab Studies, Davis - Complementary studies will be undertaken by UC Davis at the UC Davis Labs and associated facilities. Focus will be on native Delta species with major emphasis on Delta smelt. The Tracy Fish Test Facility requires information from lab flume data both before and after construction of the prototype facility. The UC Labs will assist development of fish crowder mechanisms, which are planned as important features of the Tracy Fish Test Facility. Small and large flumes at UC Davis will be fitted with newly designed crowders, and behavior and movement of Delta smelt, other sensitive native species, and important non-native fish (striped bass and American shad), will be observed under rigorous experimental design protocols, which include use of video. Crowders will be tested for efficiency of moving fish through flumes and along the face of angled screens (positive barrier) into bypass entrances. All experiments will be designed and conducted following discussion and coordination with Reclamation researchers to increase complimentarity of studies. Experiments will be conducted under light and dark conditions. These data will be applied to engineering designs and operations at the on-site Tracy test facility. An adaptive management process will be undertaken. The UC Labs will also carry out further "treadmill" type research, with focus on both native species and non-native species such as juvenile striped bass and American shad. Impingement and fish behavior/movement tests will be observed under varying "sweep" and "approach" (0.2-0.4 fps) velocities associated with positive barrier screens. Further, screening efficiencies and fish impingement along positive barrier screens will be studied under various debris loadings characteristic of south Delta screens. Annual research progress reports will be submitted, with final results intended for technical journal articles.

CA Department of Fish and Game (Fish Re-Distribution Sites) - CF&G will complete a

synthesis of all literatures and activities pertaining to fish transport and release/stocking methods including those associated with fish screening facilities and supplemental fishery (hatchery) programs throughout the world. Published articles, governmental literature, grey literature, information from personal interviews will all be used. The resulting document will be used to recommend and implement future improvements in fish transport and stocking activities associated with the Delta fish salvage facilities. The major hypothesis is that changes in fish transport and stocking methods are required to increase survival and condition of all species associated with the south Delta fish salvage facilities.

Table 1. Monitoring and Data Collection Information

Biological /Ecological Objectives			
Hypothesis to be Evaluated	**Monitoring Parameter(s) And Data Collection Approach**	**Data Evaluation Approach**	**Comments/Data Priority**
More efficient fish screens, louvers, crowders, separators, bypasses, pumps, and fish transportation and stocking improvements can be developed.	Subcomponents of screens, louvers, crowders, separators, bypasses, pumps, and fish transportation and stocking elements will be tested for performance and efficiency under a variety of flows and with a variety of fish species.	All Data Computerized; Portion of Data For Descriptory Analysis; Replicated Data Evaluation by Standard Statistical Procedures; all Fish Behavior and Movement Data Correlated with Environmental Variables (i.e., flow rates, light intensity, temp, debris loads)	High Priority on Native Fish Interactions with subcomponents such as screens, crowders, and sorters under varying flows,

LOCAL INVOLVEMENT

Letters have been sent to the Contra Costa, San Joaquin, and Alameda Counties Board of supervisors and County Planning Departments, and the Delta Protection Commission informing them of our intent to submit a proposal to CALFED for funding to develop a new test facility at the present Tracy Fish Collection Facility site. A copy of these letters are attached at the end of this proposal.

A Notice of Intent was placed in the Federal Register on February 19, 1999 announcing the preparation of and EIS or EA for the project. In addition, various county agencies, local groups, landowners, facility operators and other affected parties were sent a fact sheet on the project in early March 1999, informing them of the purpose of the project, the need for action, planning activities, benefits, cooperating agencies, points of contact, and two public scoping meetings which were held on March 17, 1999, in Sacramento and March 18, 1999, in Tracy. Approximately 460 people/entities were sent this fact sheet. As a result of the public scoping meeting and requests from other interested parties, the mailing list is expected to grow to about 580. Listed below are some of the entities contacted. A complete mailing list can be provided upon request.

Local groups notified of the project included: California Sport Fishing Alliance, Delta Protection Commission, San Joaquin River Water Users Company, California Striped Bass

Association, United Anglers of California, Sierra Nevada Alliance, The Bay Institute, Natural Resources Defense Council, Sierra Nevada Alliance, California Sport Fishing Protection Alliance, Delta Wetlands, Environmental Defense Fund, Citizens for Safe Drinking Water, The Nature Conservancy, Save San Francisco Bay Association, Friends of the River, and Sierra Club Legal Defense Fund.

Affected landowners and other parties contacted included: neighbors (Sheldon Moore, Hammer Island residents, Dell's Boat Harbor, etc.), San Luis & Delta-Mendota Water Authority, California Department of Water Resources, Western Area Power Administration, Banta Carbona Irrigation District, Reclamation District 800, 2065 and 2118, California Urban Water Agencies, San Joaquin River Exchange Contractors Water Authority, East Bay Municipal Utility District, Natural Resources Conservation Service, South Delta Water Agency, Bethel Island Municipal Improvement District, California Farm Water Coalition, California Water Commission, Association of California Water Agencies, Alameda County Water District, Metropolitan Water District of Souther California, Modesto Irrigation District, State Water Contractors, Family Water Alliance, and the Central Valley Project Water Users Association. Based on all of the above initial outreach efforts, only one interested party (a landowner) has expressed significant concerns with the proposed project. This concern may not be an issue since it is expected that the proposed 500 cfs facilities can be accommodated on existing federal property. Copies of letters providing written permission for property use or access are provided at the end of this proposal.

The plan for outreach includes mailings and public meetings, such as the scoping meetings held in March. A web site has been developed, http://www.mp.usbr.gov/tffdir.html, which contains up-to-date information and points of contacts. Additional information can be received on Reclamation's "Grapevine" at 1-800-742-9474.

Sample letters are available which requested permission from adjacent landowners to set markers for an aerial survey and to do geological borings on their land.

Third party impacts are generally beneficial. With the development of better salvage technology at the Tracy Fish Collection Facility, other existing and future fish salvage facilities will benefit. Delta fisheries, as a whole, will benefit from the improved salvage at the Tracy facility, which will return more fish to the Delta. Local economies supported by sport fishing and delta and river recreation may also benefit from long term improved fisheries.

COSTS

Table 2. Tracy Fish Test Facility Budget Estimates (CALFED funds only in millions of dollars)

Task	Direct Labor Hours	Direct Salary and Benefits	Service Contracts	Material and Acquisition Costs	Miscellane-ous and other Direct Costs	Overhead and Indirect Costs	Total Cost
1- Engineering Designs & Specifications	11,219	0.920		0.030	0.040	1.010	2.000
2- Environmental Compliance (EA/IS)	1,122	0.092		0.003	0.004	0.101	0.200
3- Project Management	1,963	0.161		0.00525	0.007	0.17675	0.350
4A- Fishery & Engineering Studies/ USBR/ Denver/Tracy	13,463	1.104		0.036	0.048	1.212	2.400
4B- Fishery & Engineering Studies - UC Davis			0.600				0.600
4C- Fishery Stocking Studies - CDFG			0.150				0.150
TOTALS	27,767	2.277	0.750	0.07425	0.099	2.49975	5.700

Table 3. Tracy Fish Test Facility Quarterly Budget Estimates (CALFED Funds Only in millions of dollars)

Task	Quarterly Budget Jul-Sep 99	Quarterly Budget Oct-Dec 00	Quarterly Budget Jan-Mar 00	Quarterly Budget Apr-Jun 00	Quarterly Budget Jul-Sep 00	Quarterly Budget Oct-Dec 01	Quarterly Budget Jan-Mar 01	Quarterly Budget Apr-Jun 01	Quarterly Budget Jul-Sep 01	Total Budget
1- Engineer. Designs & Specifications	0.400	0.325	0.325	0.325	0.325	0.075	0.075	0.075	0.075	2.000
2- Environ. Compliance (EA/IS)	0.075	0.01875	0.01875	0.01875	0.01875	0.0125	0.0125	0.0125	0.0125	0.200
3- Project Mgmt	0.070	0.050	0.050	0.050	0.050	0.020	0.020	0.020	0.020	0.350
4A- Fishery & Engineer. Studies/ USBR/ Denver/ Tracy	0.700	0.250	0.250	0.250	0.250	0.175	0.175	0.175	0.175	2.400
4B- Fishery & Engineer. Studies - UC Davis		0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.600
4C- Fishery Stocking Studies - CDFG		0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.01875	0.150
TOTALS	1.245	0.7375	0.7375	0.7375	0.7375	0.37625	0.37625	0.37625	0.37625	5.700

Schedules by Task

Task 1

Engineering Designs for the Tracy Fish Test Facility - 7/99 - 9/01

Milestones	
Complete initial designs, begin final design	7/1/99
Design data request	7/5/99
Value engineering study	11/15/99
50 Percent design review	7/01/00
Review of final specifications	9/15/00
Specifications published	11/30/00
Open bids	1/30/01
Continue designs of associated structures as guided by lab and model studies	2/1/01-9/30/01

Task 2

Environmental Compliance - 7/99-9/01

Draft EA by July, 2000
Final EA by Dec, 2000
Permits and other authorizations by Dec, 2000
Endangered species consultations finished by Dec, 2000
Follow-up and implementation compliance activities, 1/2001 - 9/2001

Task 3

Program Management/Coordination - 7/99-9/01

Requires activities throughout the project.

Task 4A,B,C

Fishery and Engineering Studies - 7/99 - 9/01

Provide final critical design engineering data for *major components of facility by spring, 00*
Complete lab models and flumes for experiments
Testing fish/louver and fish screen interactions, 7/99-12/99
Conduct lab and field fishery/engineering experiments and assessments, 7/99 - 9/01
Develop document on literature synthesis and Recommendations for improving Fish transport and re-distribution, 10/99 - 9/01

COST-SHARING

No cost sharing is proposed under this proposal which has been specifically designed to develop technology necessary to screen large Delta diversions, including Clifton Court Forebay. Screening such diversions is a major component of all of the alternatives under consideration by CALFED. Cost

sharing for the new Tracy Test Facility will be pursued under CVPIA Section 3406(b)(4) cost sharing requirements.

APPLICANT QUALIFICATIONS

Organization of Staff and Other Resources to be Used in Implementing Project - Reclamation's technical staff in Denver, and management staff in Regional (Mid-Pacific), Area (Fresno), and Project (Tracy) Offices will provide the overall project management. Reclamation's research and engineering support resources including research flumes and design engineering offices in Denver, all existing facilities at the Tracy site (aquaculture center, fish labs, fish pump and above-ground fish holding pool, office and computer labs), and Mid-Pacific Regional equipment and crews for gathering on-site geological data will be available for implementing this project. Lab facilities and expertise at UC Davis will be enlisted, as will facilities and expertise at DFG's Fish Facilities Research Unit.

Nature and Extent of Other Collaborating Participants - Faculty and facilities at the UC Davis Hydraulics Laboratory now engaged in Delta fisheries work will be participating in development of fish crowder mechanisms and further "Treadmill" tests, helping to define fish behavior in engineering facilities being designed for the Tracy prototype facility. Staff and facilities at DFG's Bay-Delta Division (Fish Facilities Research Unit) will be engaged in improvements related to fish transport and re-distribution functions for the Tracy prototype.

Individual Responsibilities - Dr. Charles Liston, USBR Denver, will serve as the overall Technical Team Leader and technical coordinator for this project. Art Glickman and Rick Christensen, USBR Denver, will lead the engineering design task. Rich Raines, USBR Denver, will lead the Environmental Compliance Task. Herb Ng, USBR Tracy, will lead the on-site Project Management Task. Ron Brockman, USBR Sacramento, will serve as Mid-Pacific Regional Coordinator. Brent Mefford, USBR Denver, will lead physical modeling and testing efforts. Drs. Lev Kavvas and Joe Cech, UC Davis, will lead the UC Davis lab experiments. Robert Fujimura, DFG, will lead DFG's studies on fish transport and re-distribution.

Biosketches

Charles R. Liston, Ph.D., Research Aquatic Scientist, GS-14, Reclamation

B.S, M.S., Ph.D - Biology and Aquatic Sciences

Prior to Reclamation (1989), Tenured Associate Professor, Michigan State Univ. 30 + years experience in applied research related to water resource development and fisheries assessments at water facilities, and fish protection technology development; directed multi-million dollar interdisciplinary fisheries programs in academia and government; numerous publications and technical reports; presently directing technical programs for the Red Bluff Research Pumping Plant Project (Sacramento River) and the Tracy Fish Facility Improvement Program; selected as Reclamation's "Researcher of the Year", in 1998.

Ron Brockman, Mid-Pacific Fisheries Program Coordinator, GS 13, Reclamation

B.S., M.S. - Biology and Applied Biological Sciences

Bureau of Reclamation, 1975 to present; at Regional Office since 1979; 1979-1995, worked with variety of land use management, and fish and wildlife issues; since 1994, has focused on CVPIA work, mainly on development and installation of fish screen projects; Mid-Pacific coordinator for the Tracy Fish Facility Improvement Program 1992; currently Reclamation's Program Manager for the Anadromous Fish Screen Program and Contra Costa Canal Fish Screen Program, and is the Fisheries Program Coordinator at the Mid-Pacific Regional Office.

Herbert S. Y. Ng, Civil Engineer, Bureau of Reclamation

B. S., Civil Engineering; MBA

With the Bureau of Reclamation the past thirteen years; Present position is Program Coordinator. As Program coordinator, has been involved in the Tracy Fish Facility Improvement Program the past 10 years. Prior to that, was Chief of the Water Division at the Tracy Office, which included oversight of the Tracy Fish Collection Facility. Before Reclamation, was the Facilities Engineer for Sharpe Army Depot , in charge of all base operations, maintenance and construction. With this, supervised 110 staff personnel.

Rick Christensen, Senior Mechanical Engineer, Bureau of Reclamation

B.S. - Mechanical Engineering

With Reclamation since 1981; Specialities: preparation of designs, computations, layouts, drawings, reports manuals, specifications, operational procedures, procurement procedures, fabrication techniques, and installation for mechanical equipment; responsible for designs, specs, and construction support for trash racks, conveyors, selective withdrawal structures, fish screening equipment, screen cleaning systems, fish bypasses, flow measurement equipment, engine generators, temperature sensors, and dredging equipment. Extensive experience and special expertise in engineering studies and designs for fish facilities.

Brent W. Mefford, P.E., Hydraulic Research Engineer, Reclamation

B.S., Watershed Science; M.S. Civil/Hydraulic Engineering

Hydraulic research engineer responsible for the environmental engineering program at Reclamation's Water Resources Research Laboratory. For over ten years he has been heavily involved in research and design of fish passage and fish protection structures located throughout the western United States. Received Reclamation's "Engineer of Year Award" in 1999 for engineering applications for fish protection facilities.

Arthur Glickman, P.E., Engineering Design Team Leader, Reclamation

B.S., Civil Engineering

With Reclamation since 1968; Specialities include: coordinating preparation of designs and specifications for large and small projects, design of hydraulic structures such as diversion dams, fish screens, fish passage facilities, canals and pipelines. Currently serves as design team leader on several fish passage and fish screen projects - Glenn-Calisaya Irrigation District Fish Screen Extension, Contra Costa Canal Fish Screen Structure, and Marble Bluff Gradient Facility.

Richard Raines, Wildlife Biologist and Environmental Compliance Specialist, Reclamation

B.S., Zoology; M.S., Biology and Community Ecology

With Reclamation since 1991; Formerly with EPA (1988-1990), USFWS (1976-1988), and Corp of

Engineers (1974-1976). Specialities most pertinent to present project include: fish salvage and restoration, endangered species consultations, clean water act permitting, interdisciplinary matrix team planning activities, and environmental compliance activities (NEPA/CEQA).

Robert W. Fujimura, Associate Biologist, Fish Facilities Program, DFG

B.S., Fisheries; M.S. Natural Resources

Principal investigator and lead person for DFG Fish Facilities Research Unit; development, execution, analysis, and reporting of field and lab research of new and existing fish passage facilities in Sacramento-San Joaquin Estuary. Current fish studies include fish handling and trucking evaluations at Skinner Fish Facilities, Delta fish screening performance (UC Treadmill Project), Delta small diversion monitoring, juvenile salmon telemetry evaluation, San Joaquin River adult salmon telemetry study, and a Chinese mitten crab movement study.

M. Event Kavvas, Ph.D., Professor, UC Davis, Hydraulics and Hydraulic Engineering

Dr. M. Event Kavvas has been a professor in the Department of Civil and Environmental Engineering since 1985 and Director of the UC Hydraulics Laboratory since 1991. He is the author of more than 75 journal and proceedings publications in the areas of hydraulic and hydrologic engineering. His areas of specialization include: physical hydraulic modeling of environmental fluid flows, pollutant and sediment transport, and modeling of hydrologic processes such as overland flow, erosion, and infiltration. He is presently principal investigator in the Fish Treadmill project.

Joseph J. Cech, Jr., Ph.D., Professor, UC Davis, Fish Physiology

Dr. Joseph J. Cech, Jr. has been a professor at UC since 1975 and was Chair of the Department of Wildlife, Fish, and Conservation Biology from 1992-1997. He has published more than 80 peer-reviewed articles in the fields of physiology and physiological ecology of fishes, and has won numerous awards, honors and grants. He has completed eight contracts with state agencies for studies of the physiological ecology of fishes of the Sacramento-San Joaquin system. He is presently co-principal investigator,
with M. L. Kavvas (Department of Civil and Environmental Engineering, UC) on the Fish Treadmill Project.

COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

Since Reclamation (applicant) is a federal agency, an SF424 is not required as part of this proposal. As per Table D-1 of the February 1999 PSP, this proposal also does not need standard contract clauses completed as part of the proposal package since Reclamation is a federal agency and not applying for construction funds at this time.

NOTIFICATION LETTERS

I-013288

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Board of Supervisors
Alameda County
2263 Santa Clara Avenue
Oakland, California 94612

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Board Members:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

Major tasks of this proposal include final design engineering with "construction ready" specifications for a test facility of up to 500 cubic feet per second; fishery-engineering research to assist and refine facility design and future construction, operation, and evaluation; completion of all environmental compliance and permit requirements and documents; and, overall project management and coordination.

The cost of this program is estimated at $5.7 million to be incurred during July 1999 through September 2001 with no adverse impacts anticipated. This proposal does not include construction of the project.

If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Mr. Phil Batchelor
County Administrator/Cler of
the Board of Supervisors
Contra Costa County
651 Pine Street, 11th Floor
Martinez, California 94553

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Mr. Batchelor:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Mr. Dennis M. Barry
Director, Community Development
Contra Costa County
651 Pine Street, 4th Floor, North Wing
Martinez, California 94553

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Mr. Barry:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Board of Supervisors
Contra Costa County
651 Pine Street
Martinez, California 94553

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Board Members:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Ms. Lois Sahyoun
Clerk of the Board of Supervisors
San Joaquin County
222 East Weber Avenue, Suite 701
Stockton, California 95202

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Ms. Sahyoun:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Mr. Ben Hulfe
San Joaquin County
Community Development Department
1810 East Hazelton Avenue
Stockton, California 95209

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Mr. Hulfe:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Board of Supervisors
San Joaquin County
222 East Weber Avenue, Suite 701
Stockton, California 95202

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Mr. James Sorensen
Assistant Planning Director
Alameda County
399 Elmhuist, Room 136
Hayward, California 94544

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Mr. Sorensen:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Ms. Crystal K. Hishida
Clerk of the Board of Supervisors
Alameda County
1221 Oak Street, Suite 536
Oakland, California 94612

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Ms. Hishida:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:

MP-410
ENV-4.00

APR 15 1999

Ms. Margit Aramburu
Executive Director
Delta Protection Commission
PO Box 530
Walnut Grove, California 95690

Subject: Intent to Submit a Proposal to CALFED for Funding to Develop Technology to Meet Modern Fish Protection Criteria and Enhance Fish Screening and Salvage Facilities at Water Diversions in the Sacramento-San Joaquin Delta, California

Dear Ms. Aramburu:

The purpose of this letter is to notify you that Reclamation is submitting a proposal to CALFED for funding to develop technology to meet modern fish protection criteria and enhance fish screening and salvage facilities at water diversions in the Sacramento-San Joaquin Delta.

This project proposes to develop and test new technology with the primary objective of improving fish protection at major water diversions in the south Delta with benefits for all large diversions in the Delta. This proposal investigates placing test facilities near the existing Tracy Fish Collection Facility (Old River, near the border of Contra Costa and Alameda Counties) using input from Reclamation's laboratories and research activities, laboratories of the University of California Davis, and California Department of Fish and Game Bay-Delta Division's Fish Facilities Research Unit.

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If you have any questions regarding this proposal or the project, please call Mr. Bill O'Leary at (916) 978-5206 (TDD 978-5608).

Sincerely,

Robert F. Stackhouse
Regional Resources Manager

PROPERTY ACCESS LETTERS

I-013309

United States Department of the Interior
BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR -3

Douglas R. & Sylvia T. Little
17250 W. Von Soston Road
Tracy, California 95376

Subject: Right-of-Entry Permit

Dear Douglas & Sylvia Little:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

Reclamation will not hold you liable for the cost of the work or for possible injuries to our employees or contractors while they are on your land. Reclamation will be responsible for any loss or damage to your property, crops, or livestock that may be caused by our activities on your property. If you feel you have sustained damages, please write or call without delay so we can discuss a settlement with you. For damages contact:

Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

We intend to keep disturbance in the area to a minimum. In this regard, should there be locked gates restricting access to the area, it would be appreciated if you would inform us of the location and the person we should contact in order to obtain a key. Should you wish to be notified prior to our entry, please provide us with information as to how you may be contacted. In addition, please inform any leasee on your property of Reclamations entry.

You may give your permission for Reclamation and/or its' contractors to enter your land for the purpose stated above by signing and returning one copy of

I-013310

this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

Michael Jackson
for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Douglas R. Fiala
Signature

3-22-99
Date

Sylvia T. Fiala
Signature

4-2-99
Date

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR - 3

Draper Family Ptp
Independent Farm and Business
5233 E. 14th Street
Oakland, California 94601

Subject: Right-of-Entry Permit

Dear Ladies and Gentlemen:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

Reclamation will not hold you liable for the cost of the work or for possible injuries to our employees or contractors while they are on your land. Reclamation will be responsible for any loss or damage to your property, crops, or livestock that may be caused by our activities on your property. If you feel you have sustained damages, please write or call without delay so we can discuss a settlement with you. For damages contact:

Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

We intend to keep disturbance in the area to a minimum. In this regard, should there be locked gates restricting access to the area, it would be appreciated if you would inform us of the location and the person we should contact in order to obtain a key. Should you wish to be notified prior to our entry, please provide us with information as to how you may be contacted. In addition, please inform any leasee on your property of Reclamations entry.

You may give your permission for Reclamation and/or its' contractors to enter your land for the purpose stated above by signing and returning one copy of

I-013312

this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

Michael Jackson
for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Signature _____ Date _____

Lonnie E. Davis
Signature

3-22-99
Date

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR - 3

Frances P. Trust Patteson
PO Box 64
Tracy, California 95378

Subject: Right-of-Entry Permit

Dear Frances Patteson:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

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Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

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I-013314

this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Frances F. Patterson
Signature

March 8 - '99
Date

Signature

Date

United States Department of the Interior
BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR -3

Thomas A. Michael & Catherine M. Trust
Route 1, Box 35D
Byron, California 94514

Subject: Right-of-Entry Permit

Dear Thomas Michael & Catherine Trust:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

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Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

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You may give your permission for Reclamation and/or its' contractors to enter your land for the purpose stated above by signing and returning one copy of

I-013316

this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

Michael Jackson
for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Thomas A. Michael — Signature — 3/5/99 — Date

Signature — Date

Please contact me prior to entry + for a key.
Office 209-833-3281
Home " 836-4245
Thank You

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR -3

La Verne & Jane Peterson
15991 Kelso Road
Byron, California 94514

Subject: Right-of-Entry Permit

Dear La Verne & Jane:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

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Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

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this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

LaVerne Peterson — Signature — 3-1-99 — Date

Jane Peterson — Signature — 3-6-99 — Date

United States Department of the Interior

BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

MAR - 3

Anthony J. Castello
2681 Mountain House Road
Tracy, California 95376

Subject: Right-of-Entry Permit

Dear Anthony Castello:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

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Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

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I-013320

this letter in the enclosed postage paid envelope. Please retain one copy for your records.

Your cooperation in this matter is greatly appreciated.

Sincerely,

for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Signature 3/9/99
Date

Signature Date

United States Department of the Interior
BUREAU OF RECLAMATION
South-Central California Area Office
2666 N. Grove Industrial Drive
Suite 106
Fresno, California 93727-1551

IN REPLY
REFER TO:

SCC-452
LND-6.00

Pierre H. Perret
Main Stone Corporation
2930 Whitegate Drive
Merced, California 95340

Subject: Right-of-Entry Permit

Dear Pierre Perret:

The Bureau of Reclamation (Reclamation) respectfully requests permission to enter upon your land (as identified in exhibit A; attached to and made a part of this Permit) by means of existing roads, lanes, or trails for the purpose of laying out markers to conduct an aerial survey to update its photography of the existing canal from the Tracy Fish Screen Facility to the Tracy Pumping Plant. The marker is a cross on a 40" x 40" piece of fabric or plastic. The Markers will be removed after the aerial photography is completed. The time frame for this aerial update is from March 1 to April 30, 1999.

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Bureau of Reclamation
Attention: Herbert Ng (559) 836-6248
RR 1, Box 35
Byron, California 94514-9614

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Sincerely,

for William H. Luce, Jr.
Area Manager
South-Central California Area Office

Enclosures

In Duplicate

Permission is hereby granted to enter my property, for the period of March 1, 1999, to April 30, 1999, for the above-stated purposes contained in this letter.

Signature PRESIDENT — Date 3-9-99

Signature — Date

MAIN STONE CORP., INC.
ID #77-0134844
c/o PIERRE H. PERRET
2930 WHITEGATE DR.
MERCED, CA. 95340
(209) 723-6759